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Supreme Court of the United States,

OCTOBER TERM, 1922.

No. 774 185

THE JOHN E. THROPP'S SONS COMPANY,

Petitioner,

v.

FRANK A. SEIBERLING,

Respondent.

PETITION FOR WRIT OF CERTIORARI AND BRIEF.

TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE
THIRD CIRCUIT.

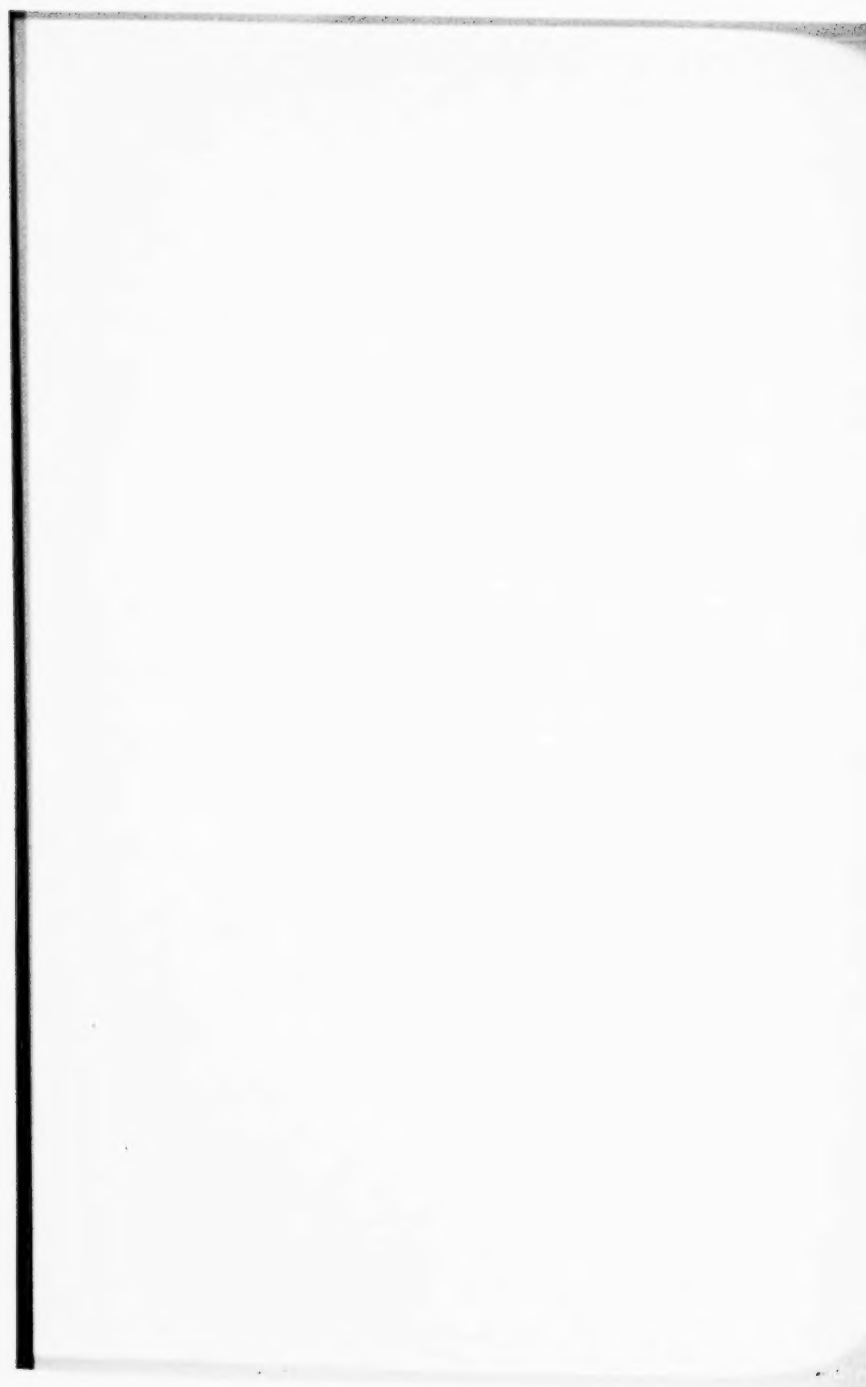
LIVINGSTON GIFFORD,
THOMAS G. HAIGHT,
E. CLARKSON SEWARD,

Counsel for Petitioner.



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PETITION FOR WRIT OF CERTIORARI.

TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE
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TO THE HONORABLE THE SUPREME COURT OF THE
UNITED STATES:

The Petitioner respectfully represents to this
Honorable Court as follows:

This is a patent suit in which the Circuit Courts
of Appeals for the Sixth Circuit and Third Circuit
have respectively held that the same claims of the
State patent No. 941,962, dated November 30, 1909,
are invalid and valid, and the object of this Petition
is to have the Supreme Court settle this conflict.

The Court of Appeals for the Sixth Circuit has decided that there was *no novelty* or *invention* in the machine described in the State patent and claimed in said claims, whereas the Court of Appeals for the Third Circuit has since held that there *is novelty* and *invention* and sustained the patent. As a result of this conflict, a very great number of automobile tire manufacturers throughout the United States are placed in a dilemma, from which they can be relieved only by an authoritative decision of this Court. The facts are as follows:

1. This suit, alleging infringement of the patent to State, No. 941,962, granted November 30, 1909, for "Pneumatic Tire Shoe Manufacturing Machine" * (Rec. Vol. II, p. 1), was brought by the Respondent, Frank A. Seiberling, owner of said patent, in the District Court of the United States for the District of New Jersey, against the Petitioner, The John E. Thropp's Sons Company, by Bill of Complaint filed April 11, 1914, and Amended Bill of Complaint filed May 13, 1914 (Rec. Vol. I, p. 1).

2. Said United States District Court, in a Final Decree entered February 21, 1922 (Rec. Vol. I, p. 631) dismissed the Bill of Complaint.

3. The Respondent appealed to the United States Circuit Court of Appeals for the Third Circuit, which appeal came on for hearing before Buffington, Woolley and Davis, Circuit Judges, and the Court, on October 19, 1922, filed its Opinion (*Davis, Circuit Judge, dissenting*) reversing the Decree of said District Court and finding the

* The patent is briefly explained, Appendix C, p. 48.

Italics throughout are ours unless otherwise noted.

patent to be valid and infringed. Petition for Reargument (Rec. Vol. I, p. 658) was duly filed on November 16, 1922, setting forth that the majority of the Court had based its decision on an assumption of fact which was not supported by any evidence in the record and which was contrary to established laws of physics, the last point being supported by the affidavits of the Professor in charge of Experimental Engineering at the University of Pennsylvania, the Dean of the Engineering School at the University of Columbia, and the Head of the Mechanical Engineering Department at Stevens Institute of Technology. Respondent filed an Answer to this Petition for Reargument (Rec. Vol. I, p. 677) in which there was no denial of the facts set forth in said affidavits. This Petition was denied, *without Opinion*, on December 4, 1922.

4. Prior to the decision in this suit, said State patent had been held invalid by the Circuit Court of Appeals for the Sixth Circuit (Warrington, Knappen and Denison, Circuit Judges) in a suit brought April 22, 1914, in the District Court of the United States for the Northern District of Ohio, Eastern Division, by the Respondent against The Firestone Tire & Rubber Company. In the said District Court, the patent was sustained, and thereafter an appeal was taken to said Circuit Court of Appeals for the Sixth Circuit. After the case was argued before said Court of Appeals, new evidence, in the form of a Belgian patent, was discovered by that Defendant and presented to the said Court of Appeals, which thereupon ordered the case remanded to the District Court to be reopened for additional proofs on the subject of the Belgian patent, unless the parties within fifteen

days otherwise disposed of the matter by stipulation (245 F. R. 937). A stipulation was thereupon entered into by which the Belgian patent and explanatory affidavits were incorporated in the record and the case argued before the said Court of Appeals for the Sixth Circuit a second time. On December 13, 1918, said Circuit Court of Appeals for the Sixth Circuit rendered an Opinion holding said State patent invalid. For the convenience of the Court a copy of said opinion is attached hereto as Appendix A. Thereafter the Mandate of said Court of Appeals duly issued and a Decree that the patent was invalid was entered in said District Court.

5. In the case in the Sixth Circuit, plaintiff there (Respondent here) really presented his case on the theory that the patent covered a new *method* of making tires, and that Court of Appeals expressly considered the patent from this point of view and held that this method was anticipated by the prior patent art (*e. g.*, a Belgian patent and a Seiberling & Stevens patent), as well as by the prior method of making tires by hand. The said Court of Appeals also held that, considering the patent as a *machine* patent, the claims here involved were invalid as mere aggregations.

6. Following the decision in the Sixth Circuit, Respondent filed a Disclaimer in the Patent Office on February 14, 1919. For the convenience of the Court a copy of the Disclaimer is attached hereto as Appendix B. In so far as the said Disclaimer affected the claims now involved, it constituted an attempt to, in a *formal* manner, change the said claims so as to make them cover the *same* method or mode of operation which Respondent had attrib-

uted to the said claims in the case in the Sixth Circuit, and which method or mode of operation had been held, by the Court of Appeals in the Sixth Circuit, to have been anticipated, as above recited.

7. The records before the two Courts of Appeals in the Sixth and Third Circuits were substantially the same. In both cases, Respondent relied upon the patent as covering a new method or mode of operation. In both cases, by way of defense, the defendants relied upon the prior method of making tires by hand, the Belgian patent, the Seiberling & Stevens patent, and aggregation. *In both cases, the Courts made diametrically opposed decisions on all of these issues.* The respects in which the said two Courts of Appeals differ can probably best be specifically set forth by quoting parts of their respective Opinions which deal with the same issues.

(a)

Respondent urged in both cases that centrifugal force was an important feature in the method or mode of operation of the State patent. On this point, the majority Opinion in the Third Circuit said (Rec. Vol. I, p. 643):

"the crux and dominating functional feature of State's machine is the use upon the fabric of a centrifugal force caused by rapid rotation,".

On the contrary, the Court of Appeals for the Sixth Circuit said (*infra*, p. 43):

*"Centrifugal force is not mentioned, in State's specification, save as creating an obstacle to be avoided. * * * To make centrifugal force an effective basis of validity in the State's patent would be to give a monopoly of the spinning process or of rapid core rotation; and each was old."*

(b)

The defendants contended in both cases that the Belgian patent operated in substantially the same way as the State patent, but the Court of Appeals for the Third Circuit overruled this and said in its majority Opinion (Rec. Vol. I, p. 651) :

“Matherne [the Belgian] plastered his puckers to the core *without stretch*, and thereafter sought to roll out the puckers.”

and again

“Matherne did not touch upon or solve the problem overcome by State.”

On the contrary, the Court of Appeals for the Sixth Circuit said (*infra*, p. 38) :

“the *Belgian tool* in its radial progress *was bound to stretch* and reshape the fabric *in substantially the same way that is done by State.*”

(c)

With respect to the anticipatory effect of the Seiberling and Stevens patent the Court of Appeals for the Third Circuit said in its majority Opinion (Rec. Vol. I, p. 641) that the Seiberling & Stevens machine was

“a machine of *wholly different type* from the one [State's] here in question.”

On the contrary, the Opinion of the Court of Appeals for the Sixth Circuit said (*infra*, p. 31) :

“State's machine was of the *same general type* as Seiberling & Stevens.”

(d)

In dealing with the question of the identity of the prior hand method and the asserted method of the State patent, the majority Opinion of the Court of

Appeals for the Third Circuit said (Rec. Vol. I, p. 643) that State invented

“a process which is *wholly different* from the original *hand* process,”.

On the contrary, the Court of Appeals for the Sixth Circuit said in its Opinion (*infra*, p. 36) :

“The evidence that this *identical* spinning operation was performed upon tire casings by *hand* tools before State’s invention is sufficiently satisfying to meet all the requirements of the situation.”

(e)

In considering the defense of aggregation the Court of Appeals for the Third Circuit in the present case stated in the majority Opinion (Rec. Vol. I, p. 645) that

“these elements brought together and assembled for the first time by State, stamp the combination as an inventive *combination* and not as a mere mechanical *aggregation* of disjointed steps.”

On the contrary, the Court of Appeals for the Sixth Circuit said in its Opinion (*infra*, p. 35) :

“This conclusion invalidates, because of mere *aggregation*, claim 4 and all the other claims of the State patent sued upon (except the fifteenth, seventeenth and perhaps the eleventh).”*

8. Although the Disclaimer filed by Respondent does nothing more to the claims here involved than to write into them the same method or mode of

* Claims 15, 17 and 11 are now out of the case.

operation which Respondent attributed to them in the case in the Sixth Circuit, and in the light of which the Court of Appeals there considered said claims and yet held them to be invalid, the said Disclaimer is in a form and to an effect which are contrary to the Statute and decisions of this Court. (Revised Statutes, Sections 4917, 4922; *Hails v. Albany*, 123 U. S. 582, 587; *Grant v. Walter*, 148 U. S. 547, 550, 551. See also *Strause v. Williams*, 235 F. R. 126, 130, C. C. A. 2; *Fisher v. Automobile*, 201 F. R. 543, 545, affirmed 209 F. R. 255, C. C. A. 2; *Albany v. Worthington*, 79 F. R. 966, 969, C. C. A. 2; *Westinghouse v. New York*, 139 F. R. 265, 267; *Enameled v. Western*, 269 F. R. 620, 628, 629, C. C. A. 6.) It attaches approximately one hundred and fifty words of interpretation to each claim of the patent affected and amounts to *changing the patent from a machine patent to a process patent*.

9. Thus the decisions of the two Circuit Courts of Appeals conflict upon several fundamental issues affecting the validity of the State patent, upon substantially the same record, and the divided decision of the Court of Appeals for the Third Circuit also raises a question of patent law of the highest importance to patentees in general, since it involves the question of the extent to which a Disclaimer can usurp the function of a Reissue by way of making alterations in a patent.

10. Petitioner believes and represents that the decision of the Circuit Court of Appeals for the Sixth Circuit, holding State's patent to be invalid, was right, just and correct in law, and that the contrary decision of the Circuit Court of Appeals for the Third Circuit in this case was erroneous.

Wherefore Petitioner respectfully prays:

That a Writ of Certiorari may issue out of and under the seal of this Honorable Court, directed to the United States Circuit Court of Appeals for the Third Circuit, commanding said Court to certify and send to this Court a full and complete transcript of the record of all of the proceedings in this cause, to the end that said cause may be reviewed and determined by this Court, as provided by law; and that the Petitioner may have such other and further relief as to this Court may seem appropriate and in conformity with law.

LIVINGSTON GIFFORD,
 THOMAS G. HAIGHT,
 E. CLARKSON SEWARD,
Counsel for Petitioner.

We hereby certify that we are of counsel for Petitioner herein, The John E. Thropp's Sons Company; that in accordance with the request of said Petitioner the foregoing Petition has been prepared; and that the allegations contained in said Petition are true, to the best of our knowledge and belief; and that said Petition is, in our opinion, well founded in law and in fact, and should be granted.

LIVINGSTON GIFFORD,
 THOMAS G. HAIGHT,
 E. CLARKSON SEWARD.



SUPREME COURT OF THE UNITED STATES,

OCTOBER TERM, 1922.

No.

THE JOHN E. THROPT'S SONS' COMPANY,
Petitioner,

v.

FRANK A. SEIBERLING,
Respondent.

BRIEF IN SUPPORT OF PETITION.

**Grounds for the Application for Writ
of Certiorari.**

The grounds upon which the Writ of Certiorari is asked are briefly as follows:

1. The decision of the Circuit Court of Appeals for the Third Circuit, here sought to be reviewed, is in conflict with a previous decision of the Circuit Court of Appeals for the Sixth Circuit, in the case of *Frank A. Seiberling v. Firestone Tire & Rubber Co.*, December 13th, 1918, holding the State patent here in suit invalid (257 F. R. 74).

The issues upon which the case was decided in the Third Circuit in favor of the patent, were, on full hearing, decided in the Sixth Circuit adversely to the patent. In each case, the full state of the art was presented, and in each case the Courts have directly disagreed on the substantial issues. The patent is, therefore, valid in the Third Circuit

and invalid in the Sixth Circuit. This situation should be corrected, particularly since the case is of great importance affecting the manufacturers of automobile tires in general throughout the United States, and the conflict of decision gives rise to a condition of great confusion in the various Circuits.

2. Of the seven Judges of the different Courts to whom the question of the validity of the State patent has been presented on the full record, *five* disagree with the conclusion of the *two* Judges constituting the majority of the Court of Appeals for the Third Circuit in the case at bar.

3. In the present case, the respondent has filed a Disclaimer, which attempts to rewrite eleven of the claims, so as to make them be, in effect, method or process claims, instead of machine or apparatus claims, as they originally were. This Disclaimer seeks to add to each of said eleven claims about *one hundred and fifty words of interpretation*, and is a document the like of which has never been approved by any Court prior to this decision of the Court of Appeals of the Third Circuit. It is of the utmost importance to all persons or concerns interested or connected with patent matters that it should be decided by this Court whether or not a Disclaimer, filed *ex parte* and not subject to examination by the Patent Office officials, can be used so as to change a machine patent into a method patent. If this point is not now decided by this Court, there will undoubtedly be numerous attempts along this same line which will result in a great amount of litigation and indecision as to a fundamentally important provision of the patent Statutes.

Argument.

The State patent in suit, the prior hand operation of making tires, and the Belgian patent, are briefly described in Appendix C (pp. 48-52).

As set forth in the foregoing pages, the contentions of the parties and the records in the two cases in the Sixth and Third Circuits were substantially the same, so that there is a fundamental difference of opinion between these two Courts. While the Disclaimer was not filed until after the decision in the Sixth Circuit, and while the question of its legality is one of great importance, it does not change in any respect the main issues upon which the two Courts of Appeals have disagreed. This is so because the Court of Appeals in the Sixth Circuit, apparently in order to make its decision a most comprehensive one, took full note of Respondent's argument that the State patent really covered a new *method or mode of operation* and, after full consideration, held that the said method or mode of operation was *not*, in fact, *novel*. Thus the filing of the Disclaimer injected nothing new into the case, except the legality of the Disclaimer itself, for the reason that the method or mode of operation which it seeks to write into the patent is the same as that which was argued to and fully considered by the Court of Appeals in the Sixth Circuit. The decision in the Sixth Circuit did not hold the patent invalid because the form of the patent specification or claims was faulty, but because there was neither novelty nor invention in the thing described and claimed, nor in the method or mode of operation attributed to the patent by Respondent. Therefore, no amount of correction by Dis-

claimer could obviate the difficulty. Indeed, it may fairly be said that the said Court considered the claims here involved as if the Disclaimer had at that time been filed. As shown by the foregoing extracts from its opinion, the Court of Appeals in the Sixth Circuit expressly considered the questions of "centrifugal force" and "high speed rotation of the core" as well as the alleged "method" or "mode of operation" in general. We emphasize this point because the majority opinion of the Court of Appeals for the Third Circuit says (Rec. Vol. I, p. 637) "in our view the record presented in this case is substantially different from that before the Circuit Court of Appeals" of the Sixth Circuit. In point of fact the record before the Court of Appeals in the Sixth Circuit was *not presented* to the Court of Appeals in the Third Circuit, so that there was no opportunity for comparison of the two records by the latter Court and, therefore, the above quoted expression must be considered in the light of this fact.* We would also point out that the Opinion in the Third Circuit does not state in what particulars the records in the two cases differ, but, on the other hand the main ground upon which majority Opinion in the Third Circuit sustained the validity of the patent (*i. e.*, the effect of centrifugal force) was expressly considered and overruled by the Court of Appeals in the Sixth Circuit. Moreover, on the questions of aggregation, of the effect of the Belgian patent, of the Seiberling and Stevens patent and of the prior hand method, the majority opinion of the Court of Appeals in the Third Circuit takes direct issue with

* In *Diamond v. Consolidated*, 220 U. S. 428, Certiorari was granted although the second Court of Appeals said (151 F. R. 239): "In view of this *new aspect* of the case, we have no reason to doubt that on the *present record*" the first Court of Appeals would reverse its prior decision.

the arguments advanced and the conclusions reached in the Opinion of Judge Denison expressing the unanimous view of the Court of Appeals in the Sixth Circuit.

In the Opinion expressing the decision of the majority of the Court of Appeals for the Third Circuit, it is held that the *dominating* feature of the invention of the patent in suit consists in rotating the core at such high speed that centrifugal force, generated thereby, acts upon the outlying edges of the fabric to automatically stretch the same radially and contract them circumferentially. This feature is frequently referred to in the opinion as, for instance, Rec. Vol. I, p. 644, where it is said :

“But here he [State] changed to something the old hand process had never used, namely, the machine was speeded up to a point where the revolution of the wheel [core] and flying skirt of the uncemented loose fabric *stretched itself radially and formed thereby radial, diamond-shaped interstices, which contracted the normal length of the fabric.*”

and on page 643 of Vol. I of the Record, the Court said :

“the *crux and dominating* functional feature of State’s machine is the *use upon the fabric of a centrifugal force caused by rapid rotation*, a process which is wholly different from the original hand process,”

and again the same page :

“there is a gradual and uniform, and indeed an unbroken spiral sequence caused by the rapid rotation of the core and the *consequent exercise of centrifugal force on the covering material, by which it is automatically gradually stretched radially*”

and on page 649 :

“we are satisfied that the *utilization of centrifugal force to stretch the fabric* and the action

of the *spinning rolls upon a centrifugally, automatically stretched fabric*, was an entirely new combination which State brought into the tire art."

and on page 651:

"State, on the other hand, left the skirts of his fabric free, and *stretched those fabric edges into radial diamond-shaped interstices, by the use of high-speed core rotation.*"

It should be noted at the outset that *there is not a word in the patent in suit about radial stretch being produced by anything, much less that it is produced by centrifugal force.* Indeed, centrifugal force is not mentioned as performing any function whatever. As said by the Court of Appeals for the Sixth Circuit (p. 43, *infra*):

"centrifugal force is not mentioned, in State's specification, save as creating an obstacle to be avoided."

So that the Court of Appeals for the Third Circuit has based its contrary decision upon something which the patentee nowhere suggests. Again, there is no evidence in the record to support this basic holding and, as shown by the affidavits of Professors Kavanaugh, Pegram and Anderson (Rec. Vol. I, pp. 667-676), any centrifugal force generated by the high speed rotation of the core will act in a direction *opposite* to that attributed to it by Judge Buffington, and will *tend* to circumferentially (*not* radially) stretch the edges.

In this same connection, the Third Circuit Court finds that the spinning rolls merely act to apply or cement to the sides of the core the fabric which is said to have been automatically radially stretched by centrifugal force. Thus, it is said in

the opinion, Vol. I, page 644, after describing the radial stretch of the fabric skirts or edges by centrifugal force:

"as the [spinning] rolls revolved they engaged and pushed inward and against the sides of the core the *stretched* flying skirts of the fabric. Thereby he [State] then, and by the wheels [spinning rolls], pressed and cemented the *radially stretched* and therefore puckerless fabric against the lessening sides of the shoe clear down to the bead edge."

And again on the same page, it is said that the springs caused the spinning rolls

"to automatically press the *automatically stretched and loose fabric*, or skirts, in an unwrinkled state, on the bead of the lower surface of the core."

On page 648, in describing the combination of the patent in suit, the opinion says:

"the gist of which is *the rapid rotation of the core and its resultant radial stretch* acted upon by the self-adjusting, spinning rolls."

and again on page 649:

"As soon as rapid rotation begins, roll spinning also begins and *utilizes the rapid rotation* to enable the rolls to plaster an unpuckered, *radially distended diamond shaped fabric* upon the core."

On page 651, it is said that State

"never formed puckers, and indeed prevented their formation by radial stretch and radial diamond pointed interstices."

As already indicated, the centrifugal force cannot possibly produce radial stretch so that, in so far as any radial stretch is produced in the act of

smoothing the side edges or skirts of fabric down on the sides of the core, it is accomplished by the inward mechanical movement of the spinning rolls.

The fact that the fabric which the spinning rolls press against the core is *not* one which has been automatically radially stretched so as to eliminate the formation of puckers is fully shown by Plaintiff's Exhibit 35, photographs of State machines, which are reproduced on pages 189, 191 of Volume II of the Record. In these pictures, particularly on page 191, are shown an abundance of puckers in the unattached fabric, and it is admitted by Respondent's witness Trogner that this photograph shows a condition in which the spinning rolls have just about *completed* their inward radial movement on the outer layer of fabric (Rec. Vol. I, p. 626, Q. 28). This photograph shows not only the outer layer, but two or three inner layers, the spinning operations upon which have necessarily been completed, and which plainly embody a multitude of puckers or wrinkles. The operation of laying down the remainder of the puckered or wrinkled fabric *is performed by hand* (Rec. Vol. I, p. 234, line 30). This situation is well explained in the uncontradicted testimony of Petitioner's expert Waterman as to the operations of these machines which he witnessed at the Goodyear plant where the commercial machines were exhibited to him by Respondent's counsel and expert (Rec. Vol. I, p. 230, Q. 16). Mr. Waterman said, on page 233:

"In practically every layer of fabric applied very large and very bad wrinkles were formed and it was necessary to stop the machine and lift up the fabric and smooth it down by hand with a spade, after having applied cement underneath in some instances."

When it is considered that this alleged effect of centrifugal force is the ground upon which the Court of Appeals for the Third Circuit has sustained the patent, and is the feature which it points out as distinguishing the method of operation of the patent in suit from the prior hand operation and the machine of the Mathern Belgian patent, and when it is noted, as previously recited, that the Court of Appeals for the Sixth Circuit has taken a contrary view as to centrifugal force and has expressly held that the hand method and the method of the Belgian patent are the same as the method attributed to the State patent, it will be clear how diametrically opposed are the holdings of these two Courts of Appeals, irrespective of the question of aggregation. This point of rearranging and reshaping the fabric meshes or reticulations by the action of centrifugal force permeates the opinion of the Court of Appeals for the Third Circuit and is given a place of major importance, while the Court of Appeals for the Sixth Circuit not only discounts this effect of centrifugal force but says, with respect to the rearrangement of the fabric meshes (p. 44) :

“This discovery by plaintiff or his counsel was in the realm of nomenclature, not of mechanics.”

It may be stated that the Court of Appeals for the Sixth Circuit had the benefit of actually observing the operation of a full sized machine alleged to represent the patent in suit, of a full sized machine alleged to represent the Seiberling and Stevens patent, of a full sized machine alleged to represent the Belgian patent and of the hand operation, while, in the present case, the Respondent not only failed to operate its said alleged re-

production of the patent in suit before the Court, but repeatedly refused to operate the same in the presence of counsel and expert for Petitioner, even though formally requested on the Record so to do (Rec. Vol. I, p. 172; pp. 501-503).

In view of the fact that four Circuit Judges and one District Judge have already held the State patent invalid, as opposed to two Circuit Judges who have held to the contrary, it is presumed that this Court would not care to have, on this application, an extensive argument presented to demonstrate that the five Judges were right and the two Judges were wrong. However, a brief comparison of the State patent in suit and the Belgian patent, in connection with the prior hand method, is found in Appendix C (pp. 48-52), and that, together with the reasons advanced by Judge Denison, as set forth in the copy of his Opinion in Appendix A (pp. 31-44), especially when considered with what we have above said in respect to the main ground upon which the majority of the Court of Appeals for the Third Circuit based its decision, will demonstrate, we submit, that there is sufficient substance to our claim of invalidity to warrant the issuance of the Writ under the circumstances presented in this case.

Conclusion.

It is therefore submitted that the foregoing Petition for Writ of Certiorari should be granted.

Respectfully,

LIVINGSTON GIFFORD,
THOMAS G. HAIGHT,
E. CLARKSON SEWARD,
Counsel for Petitioner.

Appendix A.

Filed Dec 13 1918 WM. C. COCHRAN, Clerk.

No. 2954

UNITED STATES CIRCUIT COURT OF
APPEALS,

SIXTH CIRCUIT

THE FIRESTONE TIRE & RUBBER COMPANY,
Defendant and Appellant,

VS.

FRANK A. SEIBERLING,
Plaintiff and Appellee.

Argued March 14, 1917.

Reargued April 8, 1918.

Decided December 13, 1918.

Before WARRINGTON, KNAPPEN and DENISON,
Circuit Judges.

DENISON, Circuit Judge: Seiberling brought the usual infringement suit against the appellant, based upon two patents, each relating to the manufacture of casings for automobile tires. The first was issued to Seiberling and Stevens on June 14, 1904, and was No. 762,561; the second was issued to Seiberling on November 30, 1909, No. 941,962, upon an application made by State. The court below held valid and infringed claims 1, 2 and 14 of

the earlier patent, and 16 claims of the later patent. The defendant had denied that there was either validity or infringement. After the case had been argued in this court, the defendant discovered a Belgian patent (Mathern, of September 20, 1906) said to show anticipation of State as to some features involved; and, upon an application to remand the case for further proofs, a stipulation was finally made and approved by the court by which this patent and explanatory affidavits were incorporated into the record. The case was then again argued. The record and proofs are unusually voluminous, but, in view of the conclusions which we reach, a relatively brief statement will be sufficient.

A tire casing of the class now involved is composed of successive layers of fabric, cemented together by a suitable composition and shaped into the form of a tube, which is open on one side so that it is horseshoe-like in cross-section, and the ends of which are joined together to make it circular and endless. The tube opening or slot is along the inside; and a solid rubber body is added along the outer circumference or periphery to constitute the tread portion of the finished casing. The general process of manufacture by hand, much older than the Seiberling and Stevens patent, was this: An annular metallic core having spokes and a hub was centrally mounted upon a shaft so that it could revolve, the core thus resembling the rim or tire of a wheel. This core was approximately circular in cross-section, and its cross-section diameter as well as its entire diameter through the hub from edge to edge of the rim were proportioned according to the size of the casing to be made. The operator coated this core with an adhesive substance. He then took a strip of rubber-impregnated

fabric which would stretch out to be as long as the circumference of the core, and in width somewhat less than the circumference of the cross-section. As he revolved the core on its hub, he stretched and pasted this fabric strip upon the core, pressing and shaping it with his fingers or with hand tools so that it adhered in all places and was without wrinkles. He repeated this operation as many times as there were to be fabric layers in the casing. The impregnating composition, having the character of rubber, would also attach each two layers of the fabric together. The strip of fabric was cut upon the bias, and the warp threads therefore ran from the inner open edge of the tube in a diagonal course along, across and around the tube to the other open edge thereof; and the next layer of fabric put on was reversed so that these warp threads crossed those of the first layer at a selected angle. Where the ends of the fabric met each other, they were overlapped enough to make a pasted joint. Each layer of fabric was first pressed down and attached by the hand of the operator on its central portion throughout its length, thus constituting the part of the casing corresponding to the tread. The degree of lateral curvature here is slight, and there would be no difficulty in making a smooth attachment, but as it was continued around the remaining circumference of the cross-section, there would be an obvious tendency to gather and wrinkle. This wrinkling would be fatal to the strength of the casing, and it could be avoided only by careful manipulation and gradual shaping. The ultimately smooth and unwrinkled surface could be had by virtue of a quality which all woven material has had since weaving was known, *i. e.*, that it will contract in one direction as it stretches in another. When a fabric

is stretched in one diagonal direction, its square meshes become diamond-shaped, with the length of the diamond along the line of stretch and its width at right-angles. This produces a contraction of the fabric in the line of its width. In tire building, it is primarily the central part of the strip which is thus stretched longitudinally as it is attached to the tread of the core, leaving the side portions or wings projecting and free. Upon the same principle, if these side portions are then stretched laterally, they will shrink longitudinally, and, if this stretching is done in progressive measure as the edges are approached, the longitudinal shrinking will be greatest at the edge. In this way, it results that the fabric may be shaped smoothly and without wrinkles to the entire side core surface.

The Seiberling and Stevens patent seems to disclose a machine for doing this work automatically, instead of manually. The machine comprised (so far as now necessary to mention): first, a main power driven shaft which would indirectly engage and drive the core and with such selective connections that the core could be revolved at low speed or at high speed, or entirely released, as desired; second, a reel carrying the rubber-impregnated fabric strip; third, a tension roller retarding the reel, and thus causing the central tread strip of the fabric to be given a continuing stretch after the free end is attached to the core; fourth, a pressure roller or cylinder concaved on its exterior to match the shape of the tread of the core, whereby the tread portion of the strip was pressed upon and attached to the core as the latter revolved; fifth, an arm carrying, at its end, a laterally spring-pressed finger—"the jigger finger," and which arm was intended to be reciprocated rapidly, radially of the core, in such a way that the finger traveled in and out radially, pressing against the side of the core as

the latter revolved, and which pressure finger therefore traveled a saw-tooth course between the edge of the stretched, central, tread portion of the fabric and its final outer edge, and corresponded in function to the human finger pressing the fabric down against the core and stretching it into shape; sixth, a further arm containing a further pressure wheel to be applied along the edge of the attached fabric, after it was attached, to press it into a crease, constituting "stitching." The described operation is consistent with the idea that the side pressure-attaching finger would follow immediately the tread pressure roller, so that with one revolution of the core the machine would attach the fabric, press down the tread and press in the sides, and so that all of these devices would be in operation at the same time on the same strip. After one complete revolution, the core was stopped and the fabric cut away from the reel strip. If the one revolution had not been sufficient, then, after the fabric was cut away and the loose end pasted down, as many more turns could be had as necessary,—apparently with all the attaching means at work together,—if desired. Based upon the disclosure thus generally described, the patentees claimed:

1. "The combination in a machine of the class specified of a tension device to simultaneously smooth and flatten strips of fabric, a revolvable core to receive said strips from said device, means to form said strips approximately longitudinally about said core and means to regulate the tension on said feeding device."

2. "A machine of the class specified consisting of revoluble means to support the article to be built while in the process of manufacture and means for creasing or stitching portions of said article on said revoluble means."

14. (The fourteenth claim does not differ from the second in any respect now material.)

The second and fourteenth claims must be held invalid for the same reasons pointed out with regard to claim 4 of the State patent, later discussed. The creasing rollers are hung on a swinging arm which happens to be attached to the frame of the machine. It might as well be fastened to the ceiling of the room. The pressure applied to the creasing rollers, which forces the fabric into the creases, is the pressure of the operator's hand. They are not at any time or to any extent operated by the mechanism which operates the other parts of the machine. They are "only used at intervals." There is no combination between these creasing rollers with their supporting arm and the other parts named in the claim. Their mutual relation is precisely that of the writing lead and the erasing rubber in the rubber-tipped pencil, where the only connecting link is the carrier. *Reckendorfer v. Faber*, 92 U. S. 347, 23 L. Ed. 719. It may further be observed that claim 2 is not limited to a machine handling flat strips of fabric, unless by the phrase "in a machine of the class specified." This phrase, as found in other claims,—*e. g.*, 3,—shows no intent to effect such limitation. If the claim covers devices which receive and treat strips of fabric prewoven to form,—as it seems to,—it is anticipated by Johnston, Jeffrey or Moore.

We do not thus dispose of claim one. We are not prepared to say that it is anticipated or that there is no combination between its elements when they are treated as the specification indicates. The tread-pressure roller automatically effects the revolution of the core. With it, the reel and the tension device may be in simultaneous operation. The side pressure fingers are reciprocated by tripping in a connection with the main driving mechanism, and may be operated simultaneously with the other just named parts,—at least, for part of their work.

It is not necessarily fatal to the theory of combination that continuing the work of the pressure fingers may be necessary after the tension device has exhausted its function. Without intending to pass upon all the questions involved, we prefer to assume the validity of this claim and look to see if there is infringement.

The defendant's device is particularly described hereafter. It is enough now to say that it has no tread-forming roller which operates simultaneously with and in advance of the side-forming means, and that it has discarded the jigger finger, operated by the driving power of the machine, and has substituted side-pressing means of different form and operation.

Whether defendant's instrumentalities are equivalent to those of the Seiberling and Stevens patent, under any scope which the state of the art permits to the phrase "means to form said strips longitudinally along said core," is a question which we find unnecessary to decide. Another reason sufficiently requires the conclusion that claim one is not infringed. Out of the four elements named in the claim, the first is, "a tension device" which feeds fabric strips to the core, and the fourth is, "means to regulate the tension of said feeding device." In a certain sense, every tension device is, in itself, a means for regulating, and it is not impossible that, under some conditions, a tension device by itself might be held sufficiently responsive to the descriptive words of both the first and the fourth elements; but this claim must be construed to require the independent existence of the fourth element. This is the apparent force of the face of the claim. The specification carefully describes regulating means by which the tension resistance can be instantly varied at the pleasure of the opera-

tor, by turning an adjusting screw. The present first claim is a substitute for the first three claims as filed. At the time of filing, claims 1 and 3 contained no reference either to tension device or regulating means, while claim 2 did not mention a tension device separately from its included "means to adjust the tension on the feeding means." After a rejection, claim 3 was amended by inserting a reference to the tension device itself. After a further rejection, the three claims were cancelled and the present one substituted. It was then allowed. The applicant had presented one claim referring independently to the tension device and one claim referring independently to the means for adjusting the tension. With this in his mind, he withdrew them and presented and secured a claim calling for each of these elements as separately existing. The intent to regard the ability to modify the tension device as an essential part of the invention which was being patented, could not well be clearer. It seems now to have developed that this adjustability is not very important, in the commercial use of the machine; but these patentees then might well have believed that it was vital to an operative machine. They had in their minds a friction tension, and they saw that the amount of stretch to be given to the fabric by it would depend upon the length of the fabric strip under stretch, the width of the strip, the strength and other inherent qualities of the fabric, the extent and moisture contents of the rubber impregnation and very likely the temperature and humidity of the air in the factory. All these conditions might change from hour to hour. Hence, the independent and separate call for regulating means can not be considered a mere inadvertence, the limiting effect of which a court would be inclined to escape, if

possible. Although it may be voluntary and unnecessary, it must be given effect. (*McLain v. Ortmyer*, 141 U. S. 419, 425; *Arnold-Creager Co. v. Barkwill Co.*—C. C. A. 6—246 Fed. 441, 444.)

Defendant uses a different tension device. There is no efficient frictional resistance to the travel of the fabric to the machine, but the resistance is caused by a positive gear connection. The periphery of the fabric feed roller is compelled to travel at a speed proportionate to the peripheral speed of the core, and at a fixed percentage less. This percentage is determined when the machine is built, by providing, for the feed roller and for an intermediate roller peripherally driven by the core, intermeshing gears of the same number of teeth, and by making the feed roller of smaller diameter than the intermediate roller. After the amount of stretch is thus determined and fixed,—at, say, fourteen per cent.,—it can never be varied,—unless by an expedient which plaintiff suggests and upon which theory alone he seems finally to rely to make out infringement of this claim. It is said that, by substituting upon the feed roller another gear with a greater or less number of teeth the speed of the feed roller can be increased or diminished. This is true; and it may well be that if the defendant's machine were built in contemplation of such a change, and if an assortment of gears were provided with it therefor, it should be thought to contain "means to regulate the tension"; but there is nothing to indicate that the machine was built with any such purpose, or that the defendant has any means of thus regulating the tension, or ever has done so or desired to do so. In this situation, it seems an apt suggestion by defendant's counsel that we might as well say an ordinary table con-

tains "means for regulating" its height, because we can take off the legs and put on some longer ones.

The theory that the constant stretch insured by defendant's mechanism constitutes both a tension device and a means for regulating it is urged by plaintiff's counsel, when they say that "to regulate" means "to maintain." To adopt this theory is to say that the phrase "means to regulate, etc.," adds nothing to the claim. We can not conceive any tension device which is not, in itself, "means to maintain" a fixed tension. Further, the theory would be, obviously, untenable, unless the patent were entitled to the most extreme liberality because it produced very great practical commercial results. It can not have such a degree of credit. If the machine in the patented form had proved successful, and had gone into extensive or even considerable use, it might be regarded in this light, even though it had not been generally accepted until aided by later patented improvements. This did not happen. One machine was built, but there is evidence that no tires were successfully made upon it, and that the jigger fingers would not smooth the sides so as to make first-class tires. Certainly, its attempted use by the Goodyear Company was abandoned, the machine discarded, and no other ever built.

We further find that upon the application for the State patent Mr. Seiberling, familiar with everything which had been done on the Seiberling and Stevens machine, made an affidavit that State's machine "was the first to successfully make such tires on a commercial scale by machinery." This affidavit does not work any estoppel, but there is every reason why we should accept it as true in its necessarily implied reference to the Seiberling and Stevens machine, and decline to give that pat-

ent the breadth of construction, beyond its letter, which is appropriate only for a great practical success.

Whether defendant employs any tension device "to simultaneously smooth and flatten strips of fabric," interposing, as it does, nothing between the feed roll and the means which throw the fabric out of flat, may be passed without consideration. For the reasons stated, it must be held that there is no infringement of claim 1.

The Seiberling and Stevens patent belonged to, or was practically under the control of, the Good-year Company, one of the largest manufacturers of tires, and of which Mr. Seiberling was general manager. State was in the employment of the same company. After about five years, State filed his application for the second patent in suit. His machine was developed and his patent application prosecuted under the supervision of Mr. Seiberling. *State's machine was of the same general type as Seiberling and Stevens.* His most substantial change or improvement was that he discarded the reciprocal in-and-out forming-finger of Seiberling and Stevens and substituted a tool which he rightly calls a spinning roll. He provides, in the same general way, a core and a fabric reel and a retarding device, whereby he gets his strip of fabric attached to the core for the width of the tread portion, leaving the remaining wing portions projecting outwardly. Attached to the base of the frame which carried the revolving core was a standard, manually adjustable horizontally to and from the core; that is to say, it traveled in a horizontal track, which track was an integral part of the frame. At the upper end of this standard was a revolving head or table, called, by State, a turret, and so plainly the turret of the common turret

lathe that his choice of name was most natural. Mounted at four equi-distant points on the edge of this table are four tools, independent of each other except for their common base. The first carries the tread roller, the second the spinning rolls, the third the stitching rolls, and the fourth the bead attaching rolls. The turret standard was fixed in the plane of the revolving core, beyond the periphery thereof, and State revolved his turret until the tread roller was in the same plane, with its axis at right-angles thereto. He then moved the standard and turret forward so that the tread roller bore against the tread on the core, with such pressure as the operator chose to give it. When the tread was sufficiently smoothed down and attached, he moved the standard back, gave the turret a one-fourth revolution, bringing the spinning roll device to bear and moved that forward in the plane of the core until the operation of spinning down the side was complete. He then withdrew the standard, gave the turret another one-fourth revolution, and, in the same way, moved it forward again and used his creasing or stitching roll, if necessary. Then, again, by a similar operation, he brought into effect the fourth device on his turret, which was a bead-forming or trimming roll, to be used in certain cases only. In each instance, the time during which and the pressure with which the tool was to be applied (except for certain spring pressure) was regulated by the operator's hand. In no instance did the machine do anything except to keep the core revolving. The fact that the tools were mounted on a revolving table, which table was mounted on the frame of the machine, cannot be important. From the standpoint of an interdependent combination, the situation is the same as if these four tools had been

lying upon a work-bench by the side of the operator and he had successively selected the ones he desired. While this is obvious, it is emphasized by the fact, clearly appearing, that operators using the State machine often discard the spinning tool mounted on the turret, and, after the tread is formed, spin the sides down by hand.

In the form of spinning tool shown in the patent, there are two rolls pressed toward each other by springs and operating upon both sides of the tire at the same time. There is, thus, an automatic feature to the pressure with which the spinning rolls are applied; but this does not show the existence of any combination with the remainder of the machine. A hand tool with two oppositely spring-pressed rolls would work in the same way if it were hung from any support, or held only by the workman; and there is no relation of dependency between the automatic action of the springs and the automatic action of the revolving core. They both affect the material at the same time, and that is the most that can be said. The fabric reel and the tension device have finished their function when the first revolution is completed and when the strip of fabric has passed once around the core and has been cut and the pasted-on joint made. They have no further office in the building of the tire than if they did not exist. The tread-forming roller then is brought into play and finishes its function and drops out of action. Then, and only then, the operator brings the spinning roll to bear. It performs its work precisely as it would if the fabric strip had been stretched and attached wholly by hand; and the sides of the tire, the tread of which has been formed by the aid of the machine, may be spun down and attached by hand operation just as they are by State's device.

We do not intend to deny that a true combination may sometimes be found where the same underlying mechanism operates all parts of the machine and where different elements separately act in successive steps upon the raw material as it is being transformed into the ultimate product (though the latest decision of the Supreme Court,—*Grinnell Co. v. Johnson Co.*, 247 U. S. 426, perhaps tends to the contrary); but the trouble here is more vital. State's spinning tool has no operating connection whatever with the remainder of the mechanism. Each part performs its own work in its own way, and no new result flows from bringing the two into juxtaposition. We may find further illustration in the familiar turning lathe. If the cutting tool is carried in a holder which automatically travels along a line parallel to the axis of the revolving chucks which hold the material being shaped, we can see the combination between the chucks and the cutting tool; but not so, if the tool-holder is moved along its path by the operator's hand,—even though the path be upon a fixed guide.

In *Gas Co. v. United Co.*, 228 Fed. 684, we considered the distinctions between aggregation and combination. Applying to the present case the principles there developed and the authorities there cited, we are satisfied that there is no true combination between State's revolving core and his independent spinning tool, or between such core and his independent tread-forming roller, or between such roller and such spinning tool. The *Grinnell* case, *supra*, may involve the difference between that putting of old elements into a co-acting relationship which is invention as distinguished from a similar putting together which is merely skill, rather than involve the distinction between elements which form a composite as distinguished

from an aggregate; but, however that may be, that decision fortifies the result which we reach here. It is not easy to see any difference in principle between a device which first washes a garment, and then, by separate mechanism, dries it, and a device which first shapes and attaches the tread of the tire, and then, by separate mechanism, attaches the sides.

This conclusion invalidates, because of mere aggregation, claim 4¹ and all the other claims of the State patent sued upon (except the fifteenth, seventeenth, and perhaps the eleventh). We might safely rest our decision thereon; but plaintiff really presents his case on the theory that State discovered a new method of making tire casings or a new set of functions to be performed by associated mechanism. Although a mechanical patent may not be granted for a function (*Westinghouse v. Boyden Co.*, 170 U. S. 537), yet it is now settled that a method patent may be granted for an association of successive mechanical steps (*Expanded Metal Co. v. Bradford*, 214 U. S. 366), and to hold a mechanical patent void for aggregation, when the same monopoly sought by the patent might have been obtained through a method patent, seems somewhat artificial; hence, we prefer to point out also that State had nothing broadly new either in his method or in his selected tools; and that so far as some details may be new, they are not used by defendant.

The art of shaping a flexible sheet of metal down over irregular forms or dies, circular in cross-section,

¹Claim 4. An open tire-shoe making machine, comprising the combination of a sheet-fabric supply, a power driven ring-core, a radially moving support laterally spring-pressed toward the core, and a spinning-roll mounted on the support, for passing radially along the sides of the tire-shoe, to shape the sheeted fabric on the core, substantially as described.

was very old and was known as "spinning". This was done by clamping the metal sheet upon the form, revolving both together rapidly upon the axis of the circular cross-section, and then with a tool,—which might be a narrow or sharp-edged roller or disc held in a yoked handle,—pressing the metal down against the form. The spinning disc, being held in a plane substantially tangential to the circumference of the form at the point of contact, would itself be caused to revolve; and, if it were slightly inclined inwardly from this tangential plane, it would gradually move down along the side of the form and its path thereon and upon the metal would be helical. The successive coils of this travel might be so close together that they practically touched each other, and so the whole surface of the sheet and of the form would be covered by this travel and the sheet would be stretched and shaped to the form. If State had been the first to observe that this spinning process could be applied to shape a tire upon its core as well as to shape a bottle cap upon its core, the question of whether there was invention in the transfer would have required consideration; but he was not. *The evidence that this identical spinning operation was performed upon tire casings by hand tools before State's invention is sufficiently satisfying to meet all the requirements of the situation.*

One witness testified that this spinning operation with a hand tool was common practice for smoothing down the sides of tires at a date three years earlier than the building of the first State machine; one told of the same practice in use at Detroit the same year State was constructing at Akron; and one seems to refer to it as a common practice in the Goodyear shop in 1903. Considered critically, all this testimony might not be sufficiently definite and

positive to prevail by itself against circumstances tending to throw doubt upon it; but there are no such circumstances. When defendant's proofs closed, this proposition would ordinarily be taken as fairly established; Messrs. State and Seiberling were called as witnesses on the rebuttal; both were familiar with the history of the art; neither one denied or questioned this proposition; nor did any other witness for plaintiff. More than this, State, in his specification, speaks of this spinning operation as if it were well-known hand practice, and seems to rely upon the advantages of his tool over the existing hand method. This is not all: The Seiberling and Stevens patent shows what it calls creasing or stitching rollers. Each one is undoubtedly an effective spinning tool and capable of use as such; their edges, as shown, may be sharp enough to cause some danger of cutting the fabric, but the spinning would be done by the side bevels, not by the extreme edge; and plaintiff's theory that defendant's spinning roll is so far the equivalent of the Seiberling and Stevens stitching rolls as to make out infringement of the claim based thereon goes far to persuade that they are, in a broad sense, an anticipation of State's spinning roll. There seems no sufficient reason to doubt that Stevens used them for spinning in 1903 or 1904. The Moore patent shows what is, essentially, a spinning roll for operating against a revolving core in making a tire casing. It was intended to and did smooth down the Moore tire from the center of the tread only part way, and not much further than may be done by the typical tread-forming roll; but the operation is substantially spinning, as far as it goes, and involves, in some degree, the characteristic relocation of the threads of the fabric, even though it may only put them back where they

were before the casing was distorted by placing it on the core. In the Moore patent, the handle of the spinning roll was so attached to its frame that the roller could not effectively travel radially of its core down as far as the bead, but if its attaching staple is made larger, the whole tire can be formed thereby, as demonstrated. Further, there is no reason to doubt that State and Seiberling were familiar with the character of patent protection, and were advised by competent counsel. If they had thought that State was the first to shape the sides of the tire by the spinning operation, it is highly improbable that he would have omitted to apply for a method patent. Still further,—it is conceded that the Belgian patent is a complete anticipation of State as to the matter of employing a radially-moving spinning roll in this type of tire-making machine for shaping the side of the tire,—unless plaintiff is right in his contention that in the Belgian patent the fabric was first partially attached to the side by a device resembling Seiberling and Stevens' jigger fingers, that this operation left wrinkles and puckers, and that the spinning roll was used only to remove these wrinkles and perfect the attachment. We do not see that this alleged distinction is very important. No matter if the fabric has been already partially attached,—as much as is consistent with any reasonable theory of operation,—the tool of the Belgian patent is a spinning roll, and performs a spinning operation; and, if we are right in what we subsequently say regarding the "centrifugal force" theory, *the Belgian tool in its radial progress was bound to stretch and reshape the fabric in substantially the same way that is done by State*. Putting all these things together, State can not be considered as the inventor

of the method; and hence there is no reason to hesitate at the result reached because of aggregation.

One group of State's claims is distinguished by the call for shifting the revolution of the core from a slow speed while the fabric strip is being put on to a high speed while the spinning is to be done. Seiberling and Stevens did the same thing, so far as concerns any broad idea, and the particular devices by which alone State distinguishes this part of his action from Seiberling and Stevens are not employed by defendant.

Another group of claims is characterized by the requirement that the spinning roller should be set in a plane at "a receding angle" to the plane of the core. It is not clear that this thought imparts any novelty to the claims. The same angle is shown by the Seiberling and Stevens stitching rollers, and it was certainly open to the user of any hand tool to apply it in this specified plane. However, the defendant does not do this; the claim of infringement in this is based upon a confusion of thought. If we picture the spinning roller as a disc,—whereby its plane is more sharply conceived,—and if we assume that the core is vertical and its axis horizontal, and that the disc is to be applied to the core midway from top to bottom, we observe that the plane of the core and the vertical plane of the axis are at right-angles to each other, and that the relationship of the plane of the spinning roll to the plane of the core, and its relationship to the plane of the axis, are independent of each other. The plane of the spinning roll may be at right-angles to the plane of the core and at the same time at any selected angle to the plane of the axis. So far as concerns the first relationship above stated, defendant's spinning roll is normally set with its axis horizontal and parallel with the core plane, and therefore

operates in a plane at right-angles to the plane of the core; but it is capable of adjustment to, and is intended sometimes to operate in, a plane not at a receding angle to the plane of the core, but at an angle which, as compared with that shown by State, is more than ninety degrees,—an advancing angle. In other words, its carrying yoke, normally at a right-angle to the core plane, may be swung slightly on its pivot toward the outside of the core. The only purpose and utility indicated by State for his receding angle are that the disc may not become entangled with the out-flying skirts of the fabric, and the angles adopted by defendant, for normal use or for special setting, tend to produce the very result shunned by State. In the machines used by defendant the spinning roll may be manually placed at the "receding angle," but in operation it will not stay there, but returns at once to the right-angle position. Defendant did at one time make some use of a machine embodying this "receding angle," but it was not practically more than experimental and has been abandoned, and was too negligible to justify any judicial action based thereon. The defendant does set its disc at an angle, which may be called "receding," to the vertical plane of the core axis; the disc axis (in the form assumed) ceases to be horizontal, being shifted perhaps ten degrees; but this is a different matter. This setting is for a purpose different, and causes a result different from anything found in State. It brings a constant radial slip or wipe of the roller upon the fabric, and directly causes a radial stretch. The claims of this group are not infringed.

If the "forming roll" of claim 11 is the spinning roll, the claim is invalid for aggregation; if this "forming roll" is the tread roller, then the claim

is anticipated by the Seiberling and Stevens machine.

Claim 15 suggests nothing new over Seiberling and Stevens, excepting a yieldingly mounted take-up roll for receiving a layer of muslin, or thin cloth, which is upon one face of the rubber-impregnated fabric as it is rolled upon the supply reel. Precisely the same take-up roll is shown in older machines for feeding similar rubber-impregnated fabric to make rubber belting. It can not be important that the fabric in this case is received by a revolving core, rather than by the receiving mechanism of the old machines. The take-up roll does its old work in its old position and for its old purpose. Its transfer from the old machines to Seiberling and Stevens discloses no inventive novelty. Claim 17 also reads upon Seiberling and Stevens, save for the addition of "a stretching roller between the tension device and ring core whereby the longitudinal creases are taken out of the fabric and it is smoothly and evenly supplied to the ring core." This also discloses the adoption of a device in common use for the same purpose in analogous situations; but its declared purpose and effect are to avoid the very operation which defendant employs. This stretching roller is for the purpose of delivering the fabric to and upon the ring core in a smooth and flat state. Defendant interposes a convex shoe which delivers the fabric strip to the core in a curved or U shape. The curved shoe or form which gets the latter result could not be considered the equivalent of the flat rollers which get the former without a much greater degree of liberality than is,—at the best,—permitted by the state of the art.

Claim 14 is not sufficiently typical to justify using it as the criterion of infringement, as plain-

tiff would have us do; but, if it were, it shows still another reason why plaintiff must fail. It calls for a stock roll, a ring core, "a radially and transversely movable support, a tread forming roll and a laterally yielding spinning roll for passing radially over the sides of the tire shoe mounted thereon," etc. The tire shoe is not mounted on the spinning roll; the clause "for passing * * * tire shoe" is parenthetically descriptive, and the claim must be considered as specifying a radially and transversely movable support having mounted thereon a tread roll and a spinning roll. Defendant has no one support carrying these two rolls, but has two independent supports. One is movable radially, neither transversely. The claim plainly refers to the revolving turret, when it says "support," and defendant has nothing equivalent.

The argument for plaintiff takes the Seiberling and Stevens invention of 1903 and the State improvements of 1908 and puts them together as constituting one pioneer patent dated in 1903; or, stated in another way, it takes the large public acceptance and use of the State patent and thereby attributes merit to the Seiberling and Stevens patent, overlooking the undoubted fact that the first reasonably successful commercial machine was that of Vincent, who intervened between the two. It goes without saying, that the Seiberling and Stevens patent is just as effective in denying to State the position of pioneer as if it had not happened that both have been controlled by the same interests.

We are told that the centrifugal force disclosed by State's operation caused the unattached skirts of the fabric to fly out at right-angles to the plane of the core, and that the effect of the spinning tool slowly advancing against this skirt was to produce

a "hinging and folding action" which was novel and important. We are not impressed by this claim. These words do not seem very appropriately descriptive, but the action which takes place not only pertains to a method or process rather than to any particular mechanism, but it was more or less inherent in the rapid revolution of the core effected by older means, and in the use of any spinning, stitching or creasing rollers. It is not the "hinging and folding" but the radial stretching, and the resulting circumferential contraction, that bring about the desired smoothness. It is possible that in State's particular form of device, with his spinning disc at its "receding angle," and practically tangential to the core circumference at the point of contact, there will be enough "hinging and folding" back over his tool to produce a friction which would cause more stretch than could the mere rolling advance of the disc in its helical path; but if there is an appreciable effect of this kind, defendant does not have it. Defendant gets its stretch from the slip or wipe which is compelled by the fact that the spinning disc can not roll unobstructedly in its own plane,—which fact results from its inclination toward the plane of the core axis. This very inclination puts part of the disc out beyond the supposed line of "hinging and folding," and prevents a fold at the point of contact. *Centrifugal force is not mentioned, in State's specification, save as creating an obstacle to be avoided.* Perfectly successful spinning performed in court, upon a slowly revolving core, demonstrates that the outlying skirts are not essential. *To make centrifugal force an effective basis of validity in the State's patent would be to give a monopoly of the spinning process or of rapid core rotation; and each was old.*

We are also told,—and upon this plaintiff seems to place great reliance,—that Seiberling and Stevens or State,—we are not sure which, but apparently by some kind of joint action,—discovered and accomplished for the first time such a distortion of the fabric meshes as gave great strength to the built-up casing. This result plaintiff's counsel denominates "the rearrangement of the reticulations" and "placing the threads in geodetic lines." There was nothing new about this. On the contrary, it had been present in every smooth fabric tire casing that had ever been made by anybody. As we pointed out in the early part of this opinion, it is inherent in shaping a fabric to an irregular surface. It consists in the fact that when the rectangular mesh is expanded on one diagonal axis it will contract upon the other. Outside of tire casings themselves, a familiar instance is the shaping of canvas to cover the hull of a canoe. Still more familiar is the handkerchief or the collar, unevenly ironed. This discovery by plaintiff or his counsel was in the realm of nomenclature, not of mechanics.

The decree must be reversed, and the record remanded with instructions to dismiss the bill.

Appendix B.IN THE
UNITED STATES PATENT OFFICE.

DISCLAIMERPERTAINING TO PATENT NO. 941,962.

TO THE HONORABLE COMMISSIONER OF PATENTS,
Washington, D. C.

I, FRANK A. SEIBERLING, a citizen of the United States, residing at Akron, in the County of Summit, and State of Ohio, hereby represent, in the matter of a certain improvement in Pneumatic Tire Shoe Manufacturing Machines for which Letters Patent of the United States No. 941,962 were granted to me as assignee of Will C. State, also of said Akron, Ohio, on the 30th day of November, 1909, that I am the owner of the entire interest in said patent by reason of the aforesaid grant thereof to me, and that I have reason to believe that through inadvertence, accident or mistake, and without fraudulent or deceptive intention, the specification and claim of said Letters Patent are in part too broad, including that of which said State was not the first inventor.

Now, therefore, I hereby enter disclaimer, as follows:

FIRST: In respect to each of claims 4, 5, 6 and 7, of said patent, I hereby disclaim any combination of the recited elements *except when* constructed and co-ordinated for shaping and applying a previously unshaped sheet-fabric strip to that

part of the recited ring-core beyond the tread portion, *and unless* the ring-core is rotatable at fast speed by the power-drive, whereby the unapplied fabric portion is thrown out from the side of the ring-core by centrifugal force, and the recited spinning-roll support is mechanically mounted to ensure its radial movement with a gradual advance in proper relation to the fast rotating ring-core, whereby the spinning-roll, by such gradual advance over the ring-core and while pressed toward it, acts gradually upon the centrifugally thrown-out fabric to shape it to the side of the rotating ring-core while bringing it into adhesive contact therewith.

SECOND: In respect to each of claims 12 and 13 of said patent, I hereby disclaim any combination of the recited elements, *except for* the combined operations of first stretching the middle or tread portion of a previously unshaped fabric strip onto the recited ring-core and thereafter shaping and applying to the ring-core the fabric beyond the tread portion, *and unless* the recited elements are so constructed and co-ordinated that before the change from slow speed to fast speed the fabric strip as drawn from the recited stock roll onto the ring-core is stretched circumferentially under uniform tension while applying it to the tread portion, and, after the change to fast speed, the unapplied fabric beyond the tread portion is thrown out from the side of the ring-core by the consequent centrifugal force, while the recited spinning-roll, in its radial movement, acts gradually upon the centrifugally thrown-out fabric, to shape it to the side of the rotating ring-core beyond the tread portion while bringing it into adhesive contact therewith.

THIRD: In respect to each of claims 22, 23, 24, 25 and 26, of said patent, I hereby disclaim any combination of the recited elements *except when* constructed and co-ordinated for shaping and applying a previously unshaped sheet-fabric strip to that part of the recited ring-core beyond the tread portion, *and unless* the power-drive for the ring-core functions by a sufficiently high speed of rotation and consequent centrifugal force to throw the unapplied fabric portion out from the side of the ring-core, while the recited spinning-roll, in its radial movement and while pressed toward the ring-core, functions by a gradual action upon such centrifugally thrown-out fabric, to shape it to the side of the rotating ring-core while bringing it into adhesive contact therewith.

FOURTH: I hereby further disclaim that part of the claim of invention in said patent contained in claims 8, 9, 10, 11, 14, 15, 16 and 17, respectively.

FIFTH: In respect to the specification of said patent, I hereby disclaim at page 1, lines 79-80, the words "and an important feature of my invention", and at page 1, lines 92-93, the words "as another feature of my invention".

SIGNED at New York in the County of New York and State of New York, this 13th day of February, 1919.

FRANK A. SEIBERLING.

Witnesses:

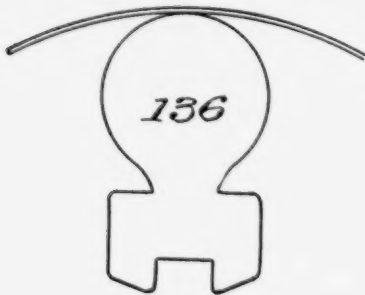
R. F. ROGERS.

ARTHUR S. BROWNE.

Appendix C.
The State Patent in Suit.

This patent (Rec. Vol. II, p. 1) discloses a machine for making the fabric body portion of automobile tires. The machine includes an iron ring which is called a core, and is of the same size and shape as the interior of the tire to be made. There is also included a roll of fabric (canvas) which has been cut on the bias into strips and impregnated with a rubber compound. The iron ring or core is geared to a source of power so that it can be rotated at low and high speeds (in commercial operation about 8 RPM and 120 RPM). A strip of the rubberized fabric is applied circumferentially around the iron core by slowly rotating the latter so as to draw the fabric from its roll. The adhesive nature of the rubber causes the fabric to stick to the periphery of the core and, after it has been applied once around the core, the applied portion is severed from that remaining on the fabric roll, and the ends of the applied portion lapped or spliced. The condition of the fabric at this stage is indicated by Fig. 12 of the patent, which is here reproduced and in-

Fig. 12.



tended to represent a section of the core 136 with a layer of fabric applied to the periphery thereof.

Without referring to some intermediate operations which it is not necessary to consider at the present time, it may be stated that the side edges of the fabric strip need to be applied smoothly to the sides of the core. This is done by means of two so-called spinning rolls, which are metallic discs a few inches in diameter that are mounted on arms, which arms are carried by a support that is mounted to be fed by a screw radially inwardly toward the axis of the core. Springs or manual pressure are used to press the spinning rolls laterally against the fabric edges and stick them to the sides of the core, as the said spinning rolls are moved inwardly toward the axis of the core. This operation is indicated by Figs. 12b and 12c here reproduced.

Fig. 12b.

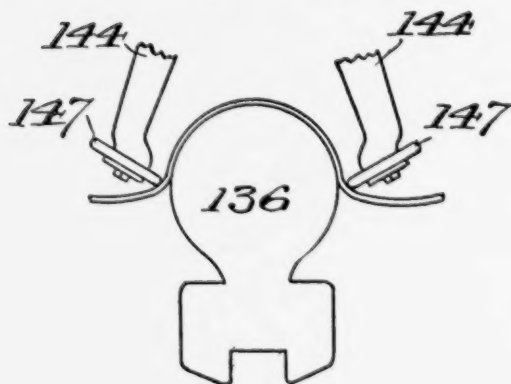
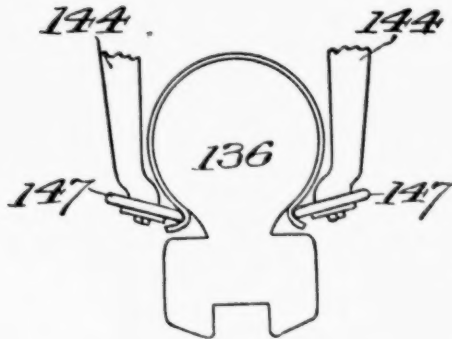


Fig. 12c.

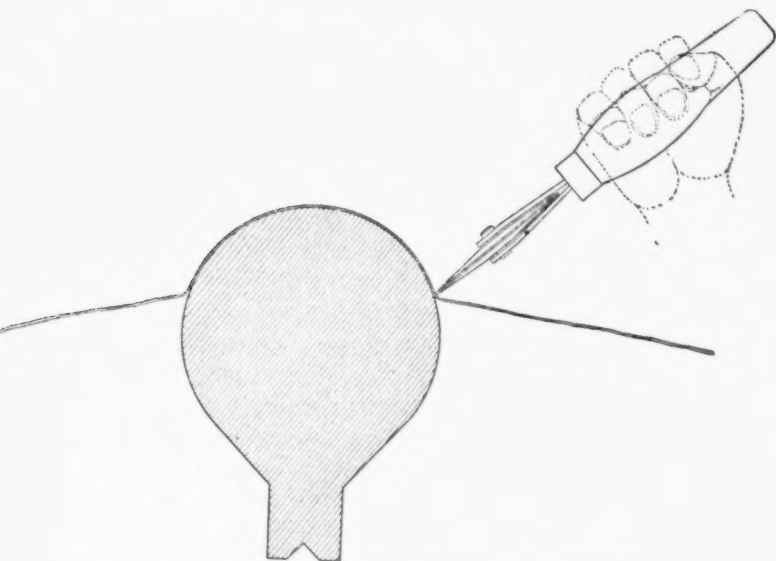
In these figures the core is again represented by 136, the spinning rolls are marked 147, and the arms which carry them 144. The progressive operation is shown by these two figures.

These spinning rolls are employed while the core is rotated at high speed, and it is believed that the inward radial movement of the spinning rolls 147, stretches the edges of the fabric in the same direction, so as to make the square meshes of the fabric take a diamond shape with the long axes of the diamonds radial of the core. This stretching is supposed to make the fabric fit smoothly to the curved sides of the core as the spinning rolls move inwardly.

Prior Hand Operation.

The prior hand operation was substantially the same. The core was rotatably mounted and the fabric applied circumferentially thereto by hand. The core was then rotated by hand until it gained

a high speed momentum and the side edges of the fabric were applied smoothly to the sides of the core by a hand tool similar to the spinning rolls employed in the machine. The following cut illustrates this last named operation.



This hand process was generally followed for several years prior to State's alleged invention, at numerous factories. It is abundantly proved by more than a dozen witnesses, including several of high standing.

Mathern Belgian Patent.

This patent (Rec. Vol. II, p. 217) is for a machine substantially like that shown in the State patent. It has the rotatably mounted core with means for rotating it at low and high speeds. There is a

fabric roll and means for applying the fabric strip circumferentially to the core. There is also a pair of spinning rolls or discs which are mounted on a support that is screw fed in a radial direction toward the axis of the core. Handles on the spinning wheel supports enable them to be pressed laterally against the fabric on the sides of the core to shape it and apply it thereto. There seems to be no denial that this machine contains all the instrumentalities of the State patent.

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1922

No. _____

THE JOHN E. THROPP'S SONS COMPANY,
Petitioner,

v.

FRANK A. SEIBERLING,
Respondent.

Notice of Submission.

TO ROBERT FLETCHER ROGERS, Esq.,
Counsel for Respondent.

Please take notice that on Monday, January 22, 1923, we shall submit the accompanying Petition for Writ of Certiorari to the Supreme Court of the United States, at the Capitol, Washington, D. C., at the opening of Court on that day, or as soon thereafter as counsel can be heard.

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Counsel for Petitioner.

Service of the above Notice of Submission, and receipt of five copies of the accompanying Petition for Writ of Certiorari and Brief in support thereof is acknowledged this _____ day of December, 1922.

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Counsel for Respondent.